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TITLE OF THE INVENTION

**ARTICLE OF CLOTHING**

INVENTORS

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**ARTICLE OF CLOTHING****CROSS-REFERENCE TO RELATED APPLICATION**

**[0001]** This application is based upon French Patent Application No. 03.04908, filed April 22, 2003, the disclosure of which is hereby incorporated by reference thereto in its entirety and the priority of which is hereby claimed under 35 U.S.C. §119.

**BACKGROUND OF THE INVENTION****1. Field of the Invention**

**[0002]** The invention relates to an article of clothing, such as a coat or jacket, or other similar garment, such as one adapted to be worn during sporting activities, provided with an arrangement to prevent penetration of foreign matter into the jacket from the bottom.

**2. Description of Background and Relevant Information**

**[0003]** Coats and jackets of the aforementioned type are particularly designed for sporting activities such as skiing, snowboarding, etc., in an environment such as snow.

**[0004]** During a sporting activity, particularly in the event of powdery snow, or during a fall, snow can penetrate inside a garment from the bottom.

**[0005]** To overcome this problem, it has been proposed to provide jackets with some kind of snow shield or impervious skirt, made of a preferably impervious material, which is attached inside the jacket.

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**[0006]** A skirt of this type is described, for example, in French Patent Publication No. 2 773 439.

**[0007]** It is attached by its upper portion inside the jacket, at a certain height above the lower edge thereof, and generally substantially in the area of the user's waist.

**[0008]** The bottom portion of such a skirt is provided with elastic means for tightening about the user's hips.

**[0009]** Once closed and tightened about the hips, the skirt then constitutes a snow shield that closes the lower opening of the jacket and prevents snow from penetrating therein, particularly in the case of a fall.

**[0010]** Such a skirt can also be used as a windbreaker, i.e., for protection against other outside and/or atmospheric conditions or elements.

**[0011]** A drawback of these known sports jackets with impervious skirts lies in that the skirt follows the movements of the jacket, and that its bottom portion tends to rise along the user's body during use and during the sporting activity, especially when lifting the arms.

**[0012]** Consequently, there is a risk of inadequate imperviousness. Furthermore, the garment is less comfortable to wear, as the skirt constitutes a constant "presence" which the user feels moving on his/her body.

**[0013]** The effect felt is particularly unpleasant when the tightened portion of the skirt rises up to the waist, as it tends to stay there and the user must open the jacket to reposition the skirt.

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**[0014]** Furthermore, the problem of imperviousness involving the ends of a garment also arises for other types of garments, particularly for the ends of jacket sleeves and the ends of trouser legs.

### **SUMMARY OF THE INVENTION**

**[0015]** An object of the invention is to overcome the aforementioned drawbacks/problems and to provide an improved impervious system for garments, which is particularly more reliable and more pleasant to wear.

**[0016]** Another object of the present invention is to propose an impervious system that can be used in other types of garments.

**[0017]** Imperviousness, here and in this entire description, refers not only water tightness or resistance to or protection against water penetration, but also resistance to or protection against the penetration of external matter, snow, and/or wind.

**[0018]** An article of clothing according to the invention has at least one portion adapted to cover a limb (arm, leg) or the torso of a wearer, such portion provided with a lower edge. Further, the article of clothing according to the invention has at least one annular skirt provided with an upper end and a lower end, the lower end of the skirt being attached to the lower edge of the portion of the article of clothing, and the upper edge of the skirt having an arrangement to tighten about the user's limb or torso.

**[0019]** In fact, the skirt is mounted in reverse, in comparison with known snow shield skirts. As a result, when the user moves, it is the lower end of the skirt that tends to rise, whereas the upper end, tightened about the torso or the limb of the user, does not move and remains tightened about the torso or limb.

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**[0020]** As a result, the user does not run the risk of losing imperviousness, and the garment is more pleasant to wear because the user does not feel the skirt moving along his/her body.

**[0021]** According to a particular embodiment, the upper end of the skirt is connected internally to the portion of the article of clothing, at a predetermined distance from the lower edge, by at least one elastic suspension arrangement.

**[0022]** Thus, it is guaranteed that the skirt will stay in place, even when the skirt is open, for example.

### **BRIEF DESCRIPTION OF DRAWINGS**

**[0023]** The invention will be better understood and other characteristics thereof will become apparent from the following description given with reference to the attached schematic drawings, showing, by way of non-limiting examples, several preferred embodiments, and in which:

FIG. 1 is a perspective view of jacket incorporating skirts according to the present invention;

FIG. 2 is a detailed view of the torso skirt of FIG. 1;

FIG. 3 is a flat view of the inside of the torso portion of the jacket of FIGS. 1 and 2;

FIGS. 4 and 5 are schematic views showing the functioning of the impervious skirts in the rest and active positions.

### **DETAILED DESCRIPTION OF THE INVENTION**

**[0024]** The jacket 1 shown in FIG. 1 has a portion 10 covering the torso and two portions 14, or sleeve portions, adapted to cover the user's arms.

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**[0025]** Each portion 10, 14 is provided with a lower edge 11.

**[0026]** The portion 10 covering the torso also has a front opening 13 adapted to make it easier for the user to put on and remove the jacket.

**[0027]** The front opening 13 is provided with closure means that can include a slide fastener/zipper 13a, as shown in FIG. 3, or any other known means, such as hook and loop fasteners (including VELCRO), for example.

**[0028]** Each torso portion 10, sleeve 14, is provided with a skirt 20, 30, respectively.

**[0029]** The construction of the skirts 20, 30 will be described more particularly in connection with FIGS. 2-6 and the skirt 20.

**[0030]** Each skirt 20, 30 includes an annular band of flexible material having a lower end 21, 31, respectively, and an upper end 22, 32, respectively.

**[0031]** The skirts 20, 30 can form a closed band, as is the case with the sleeve skirts 30, or can be provided with a vertical opening 23, as is the case with the skirt 20 for the torso portion 10. The opening 23 is closed by means 23a of a snap fastener type or the like. Each skirt 20, 30 can be made of a material that is watertight or at least water repellent, or simply resistant to air penetration, depending on the use desired.

**[0032]** This material can also be more or less extensible, such as elastically extensible, depending on the desired effect, although this is not necessary.

**[0033]** Each skirt 20, 30 is attached by its lower end 21, 31, respectively, to the lower edge of the garment portion 10, 14, respectively. The attachment is preferably made on

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the inner portion of the garment portion and is carried out, for example, by means of stitching, gluing, etc.

**[0034]** Removable attaching mechanisms, such as buttons or snap fasteners, can also be provided as long as the desired imperviousness is preserved.

**[0035]** The upper end 22, 32, respectively, of each skirt is provided with means or mechanisms for tightening about the user's waist or arm, respectively.

**[0036]** These tightening mechanisms can take the form of elastic means 22a, 32a, such as a strip or elastic threads sewn or glued along the upper end 22, 32.

**[0037]** Other tightening mechanisms, not necessarily elastic, could be provided for adaptation to the user's waist/arm.

**[0038]** These elastic mechanisms have the advantage of not requiring adjustment.

**[0039]** The upper end 22, 32 of each skirt 20, 30 is furthermore connected to the inside of the jacket by elastic suspension straps 24, 34, respectively, which attach themselves above the upper end.

**[0040]** As shown particularly in FIG. 3, the elastic suspension straps 24 are preferably housed inside gussets 12 of the jacket.

**[0041]** Similarly, gussets could be provided for housing the suspension straps 34 of the skirt 30.

**[0042]** The elastic return force exerted by the suspension straps 24 is less than the elastic tightening force exerted by the tightening mechanisms 22a, 32a.

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**[0043]** The functioning of the skirts 20, 30 is shown in a more precise manner in FIGS. 4 and 5.

**[0044]** As shown in FIG. 4, the skirts 20, 30, at rest, form a sort of impervious or protective bell between the lower edge 11, 15 of the torso portion and of the sleeves, respectively, and their upper end 22, 32, respectively.

**[0045]** Thus, they prevent any penetration of outside matter, snow, water, wind, etc., inside the torso/sleeve portions of the jacket. The degree of imperviousness or resistance to the penetration of outside matter will depend on the constituent material of the skirt.

**[0046]** During the user's movement and, for example, when lifting the arms, as shown in FIG. 5, the jacket 1 tends to rise, along with the torso portion 10; the sleeves 14 also tend to slide along the arms.

**[0047]** In this case, each upper end 22, 32, respectively, of the skirts does stay in place on the associated body portion, and only their lower ends 11, 21, respectively, follow the movement of the jacket and rise along the body by exerting a traction force on the suspension straps 24, 34.

**[0048]** As these ends 11, 21 are not in contact with the user's body, the user does not feel anything. Furthermore, the impervious bell remains efficient even if it becomes slightly deformed.

**[0049]** Moreover, as soon as the arms are lowered, the suspension straps 24, 34 return to their non-tensioned state shown in FIG. 4 and exert a repositioning force on the jacket, such that the user does not need to readjust his/her garment.



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**[0050]** It is noted that the suspension straps could be eliminated, particularly for the sleeves, or when the skirt is not provided with opening means. They are mostly used to prevent the skirt from falling down under its own weight when it is open.

**[0051]** The invention is not limited to the examples of embodiment described hereinabove by way of non-limiting examples, but encompasses all similar or equivalent embodiments. It can be applied to any garment for which similar or equivalent problems must be resolved, and more particularly garments for protection against rain, snow, wind, and water sports garments, etc.